UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,588	09/06/2005	Yoshio Akiyama	122473	2781

25944   7590   04/19/2010
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EXAMINER
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ART UNIT	PAPER NUMBER
1782	

NOTIFICATION DATE	DELIVERY MODE
04/19/2010	ELECTRONIC

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1   RECORD OF ORAL HEARING

2   UNITED STATES PATENT AND TRADEMARK OFFICE

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4   BEFORE THE BOARD OF PATENT APPEALS
     AND INTERFERENCES
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     _____
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     Ex Parte YOSHIO AKIYAMA, HIROAKI TOKUDA,
7   KAZUHISA INNAMI, SHUICHI KOSHIO and MASAAKI SASAKI

8   _____

9   Appeal 2009-013190
     Application 10/521,588
10   Technology Center 1700

11   _____

12   Oral Hearing Held: March 16, 2010

13   _____

14   Before EDWARD C. KIMLIN, CHUNG K. PAK, and
     PETER F. KRATZ, *Administrative Patent Judges.*
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16   APPEARANCES:

17   ON BEHALF OF THE APPELLANT:

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1   THE USHER: Calendar No. 59, Appeal No. 2009-013190, Mr. Schulte.

2   JUDGE KIMLIN: Good afternoon, Mr. Schulte.

3   MR. SCHULTE: Good morning.   Good afternoon.

4   JUDGE KIMLIN: Our reporter today is Sam Weston. If you have a

5   card to give him, he'd appreciate it.

6   MR. SCHULTE: Sure. And actually, the prior art is Butcher,

7   B-u-t-c-h-e-r. We've got some displays just based on -- just to help -- I -- a

8   lot of equations in this application, so we have some displays just to help

9   clarify things. But at any rate, good morning, Your Honors.

10   JUDGE KIMLIN: Good afternoon.

11   MR. SCHULTE: Unless you have anything to discuss initially, I'd

12   like to discuss the two issues. The first being rejection under 102(b) over

13   Butcher, and the second issue after that is the rejection under 112, second

14   paragraph, regarding the term "low compatibility". First is the 102 rejection.

15   This case is related -- is directed to blow-mold articles, *i.e.* containers, *i.e.*

16   bottles. And what we're trying to do is have -- and to understand the

17   invention is to first describe how the bottles are made, how we close the

18   bottom of the bottles, and -- which is trying to have uniform thickness

19   around the bottle, the size of the bottles, a more pleasing look to the bottles,

20   and something that's able to stand up a little bit better.

21   To first understand the invention is to understand how it's made. The

22   way that these bottles are made, you start off with this parison. This parison

23   is just a hollow cylindrical member; you cut off the bottom, you cut off the

24   top. Now, since it's hollow, what you do is you pinch the bottom of the

25   parison -- they have these pinch-off lines -- put an air tube through the top

26   and then blow up the bottle. What our claim is directed to is actually having

1 the pinch-off lines being within a defined circle -- which is in the last --

2 clause of Independent Claim 1 -- within a circle that has a diameter which is

3 equal to or less than pi -- which everybody should understand --times the

4 diameter of the parison -- again, is what is used to form the bottle -- divided

5 by n, which is the number of pinch-off lines. If you've got three pinchers, n

6 would equal 3, et cetera and so forth. And again, we're just trying to do this

7 to have, essentially, a better bottle, with even walls, stands up better, and

8 better looking.

9   What the prior art has -- and again, it goes to our Figure 2. It just

10 illustrates the pinch-off lines, which are in the center of the bottle. And in

11 example Figure 2, it has 4 pinch-off lines, although the claim calls for at

12 least 3 pinch-off lines. Butcher, which is the prior art, is again directed to a

13 blow-molded article, and it's illustrated by its Figure 1. It uses jaw members

14 alternately disposed between tuck-in members. And what it is trying to do is

15 that it is trying to cut off the bottom of the parison, and it uses these tuck-in

16 members to pinch off the parison, the bottom of it. After it does that, what it

17 is using -- as illustrated in Figure 2 here -- is a stamping foot 48 to press

18 down on the bottom in order to improve its seal, as discussed in its column

19 1, lines 1 through 14, which is something different than our invention. In

20 fact, according to Butcher -- like I said, it does not disclose a concept of

21 having pinch-off lines within a defined circle as we have claimed.

22   JUDGE PAK: Counsel?

23   MR. SCHULTE: Yes?

24   JUDGE PAK: Referring to Butcher, Column 5, it refers to the fusion

25 lines shown in Figure 4 extending radially for 1.2 centimeters, thus defining

26 a diameter of 2.4 centimeters, which was slightly less than original outside

1   diameter of the parison. Am I correct?

2   MR. SCHULTE: Yes. In the prosecution, I know that the 2.5 they're

3   referring to in Column 1 -- or Column 5, like the first two or three lines, that

4   was never an issue brought up by the Examiner. I think what the Examiner

5   tried to set forth in the final rejection was how these things would be

6   proportionately formed. I notice the final rejection mentions a 2.4 --

7   JUDGE PAK: But the Examiner did refer to it in the Answer, am I

8   correct?

9   MR. SCHULTE: What the Examiner does, and I think what the

10   Examiner takes great -- to is to show how -- mathematically why it's

11   inherent to have their pinch-off lines within a diameter that's equal to or less

12   than pi delta P divided by n.

13   JUDGE PAK: But, counsel, with respect to pi, what's the number? Is

14   that 3.14?

15   MR. SCHULTE: Correct, Your Honor.

16   JUDGE PAK: So if we have a pi equal to 3.14, n equal to 3,

17   representing 3 pinched lines, then what you have is -- what you are claiming

18   is, essentially, the diameter of the pinch line area, which is less than or equal

19   to D_P, am I correct?

20   MR. SCHULTE: If you take --

21   JUDGE PAK: Because 3.14 divided by 3 is, essentially, equal to 1.

22   MR. SCHULTE: 1.02 or something like that, yeah.

23   JUDGE PAK: So if D_P is greater than the diameter of the pinch line,

24   then you meet the claim requirement, am I correct?

25   MR. SCHULTE: If you take from their one example, you would

26   mathematically have that relationship. The one response I have for that, I

1   said they don't explicitly disclose the pi DP divided by n as we're claiming. I

2   know in the prior art, the example provided by the Examiner, the biggest

3   thing he hit on was trying to show how it's inherently disclosed.

4   JUDGE PAK: But you are claiming the article, am I correct,

5   having that characteristic?

6   MR. SCHULTE: Correct.

7   JUDGE PAK: And if this example shown in Figure 4 meets those

8   characteristics, then clearly the Examiner's position is correct in concluding

9   there is an anticipation of the claimed subject matter.

10   MR. SCHULTE: The one counter we have to that, Your Honor, is,

11   again, is they don't have the relationship. It doesn't indicate that this is

12   always the occurrence. I know the prior art doesn't recognize having to meet

13   within the less than or equal to, so the one example we, like I said, argue, is

14   the fact that it's just an example. Like I said, when you just look at their

15   description and -- if you look at the rest of the description of how they're

16   actually forming it, again they do not discuss that relationship, which leads

17   me to the two reasons why we don't think that Butcher discloses it to counter

18   the Examiner's remarks. As I said, as we argued throughout prosecution, the

19   Examiner did not argue the fact it was explicitly disclosed but the

20   Examiner's argument was that it was inherently disclosed.

21   And two points to argue with the inherently disclosed, and this is

22   coming from page 5, paragraph 9 of the Final Rejection, as we point out on -

23   - argue on page 14 of the Appeal Brief, is the fact that it's not always

24   necessarily proportional. When you pinch the bottle from two directions,

25   not simply the pinch-off line is going to be half the circumference. There are

26   various factors that can affect the pinch-off lines or the extent of the pinch-

1   off lines. The first being the shape or length of the jaws the material of the

2   parison and the forces applied to the parison by the jaws to pinch off. So if

3   you look, for example, at our Figures 1 and 2 -- I'm sorry, if you look at the

4   prior art's Figures 1 and 2, and if you look at our Figures 3-A through C, 5-A

5   through C and 6, you see two different apparatuses forming pinch-off lines.

6   And arguably, you could have possibly two different lengths for the pinch-

7   off lines.

8   The second thing that was argued throughout prosecution was whether

9   or not it inherently discloses it or inherently has pinch-off lines that are

10   within the circle that we define in our claim. And if you look at the

11   Examiner's Final Rejection, it's not very clear. I think the Examiner did a

12   very good job in the Examiner's Answer trying to fill in some of the gaps,

13   and those are some of the -- that's what I'd like to address specifically. But

14   like I said, we think there's two flaws. One, we think there should be a

15   correction to his mathematical analysis. And the second flaw is the fact that

16   he doesn't consider other -- some of the discussion provided by Butcher.

17   First going with the -- okay, what we have illustrated here is what we

18   think to be the correct mathematical analysis correcting the Examiner's flaw.

19   I note with the Examiner's mathematical analysis -- like I said, we think

20   everything should be equal to not less than or equal to. Going from the first

21   equation, which is in the Examiner's Answer on page -- and this will all be

22   from pages 14 through 16 -- first, the Examiner says the circumference of

23   the parison equals pi times the diameter of the parison. We're not arguing

24   that. It's just basic geometry. But where we think there is a difference and

25   where we disagree is that in the Examiner's Answer, he's saying that

26   Equation 2 is the less than or equal to, and we disagree. Now, on this

1   drawing up here, we've sort of illustrated based on what the Examiner's

2   comments were as to what Equation 2 is directed to. What LP section is, is

3   just a section of circumference. And if you take the total number of LP

4   sections times the number of pinch-offs, that should equal the total

5   circumference. So for example, if N is 3, based on what Butcher discloses,

6   you add up three LP sections and you've got the circumference of the

7   parison. To say less than just means you're not taking into account the entire

8   circumference. You're not closing that hole. And the Examiner never

9   addressed that issue, as to where he came up with the less than part. We

10   think the equal is correct, but not the less than. The less than part is not

11   justified.

12   Going on to the Examiner's third equation is R equals half of LP

13   section, and this is from the Examiner's Answer, and this is illustrated by the

14   bottom right illustration. And what we understand -- the Examiner says is

15   when you pinch these from three different directions, the radius of these

16   pinch-off lines would equal half an LP section, *i.e.* half of that section. So

17   again, we do not disagree with that.

18   Equation 4 is just simply say the diameter of the new bottle with the

19   pinch-off lines equals 2 times R, which we agree with, which equals LP

20   section, which is just a conversion from 3 to 4, just multiplying this by 2.

21   And again, we do not disagree with.

22   But with 5 and 6, we do disagree with. Again, with the Examiner's

23   Answer, there's a less than or equal to and there's a less than or equal to. But

24   the thing is, is when you correct his Equation 2, it automatically corrects his

25   Equations 5 and 6. Delta new -- from 4, all you're doing from 4 to 5 is

26   replacing, using Equation 2, you're replacing this LP section with a CP.

1   Again, we think it's equal to and he thinks it's less than. Again, for reasons

2   discussed earlier, we disagree. And then Figure 6, all you're doing, based on

3   Equation 1, is you're replacing CP with pi delta P. Again, we think it should

4   be -- if you correct his mathematical analysis, it should be equal to and not

5   less than or equal to. It doesn't account for less than.

6   We're thinking -- we're claiming less than or equal to, which leads me

7   to my second flaw. If you look at, from their Figure 2 again, they use this

8   stamper foot, 48 in Figure 2, in order to press down on the interior of the

9   pinching members in order to create a better seal. And we believe that when

10   you do so, and this figure is sort of to apply that illustration, is that when you

11   do so, you're making the pinch-off lines larger, you're expanding a little bit.

12   Now, the extent of how much Butcher doesn't go into, but he does talk about

13   in Column 1, lines 1 through 14, of actual expansion. So with that in mind

14   with this figure, that you would have expansion, that would make -- that

15   would actually change Equation 3 to be greater than because, again, you're

16   pushing in and expanding more. We believe that R would be greater than

17   half, which, if you follow through the rest of the way, this will be greater

18   than, this will be greater than, and this will be greater than, and just sort of

19   follows through. And as a result, that's why we do not believe it inherently

20   discloses their pinch-off lines being within a diameter that are less than or

21   equal to pi delta P over N, despite what is disclosed in Column 5, lines 1

22   through 15 of the prior art.

23   So again, just to summarize, that's why we don't believe that pinch-off

24   lines within a diameter are either explicitly or implicitly disclosed by the

25   prior art. I don't know if there's any questions.

26   The next issue I'd like to discuss is the rejection under 112, second

1   paragraph. The issue with this one is whether to determine low

2   compatibility is definite. I think the problem presented in the final rejection

3   of the Examiner's Answer is they can't determine what low compatibility or

4   what the low part of low compatibility is. Claim 12 calls for an outer layer,

5   an inner layer, with an inner layer formed of a resin having a low

6   compatibility with a synthetic resin that's used for the outer layer. We've

7   referred the Examiner to the Appeal Brief and prior responses, Reply Brief,

8   Appeal Brief, prior responses. If you look at paragraph 70, we provide

9   various polymers for the inner layer and the outer layer. We also point out

10   paragraph 70 it describes that the -- we want to have these polymers in order

11   to have a peelable container, which is the last few lines of that same

12   paragraph.

13   JUDGE PAK: So, counsel, you are saying that disclosure provides

14   some standard by which that language, low compatibility, can be

15   determined?

16   MR. SCHULTE: Yes, Your Honor. And that one skilled in the art, if

17   you know the polymers and you know what we're trying to go after, one

18   would understand the chemical -- and know what --

19   JUDGE PAK: If you know the function you want to get, you will be

20   able to identify the scope of the claim --

21   MR. SCHULTE: Correct.

22   JUDGE PAK: -- the low compatibility?

23   MR. SCHULTE: Correct, Your Honor. And I know in the Appeal

24   Brief we mentioned -- we provided a definite explanation as to what low

25   compatibility is, and I think the Examiner jumped that on his Answer, saying

26   that that's not in there word-for-word. But again, the question is whether or

1   not one skilled in the art would be apprised as to what low compatibility

2   means, and we think that our specification does, especially with paragraph

3   70. So with that, I have nothing else further to discuss.

4   JUDGE KIMLIN: We have no further questions.

5   MR. SCHULTE: All right. Thank you, Your Honors.

6   Whereupon, the proceedings were concluded.

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